

ABSTRACT

A method and system for treating at least bioorganic, organic, wastewater, and sewage sludge using recycle. The method of producing a treated sludge product comprises the following steps: (a) forming a sludge mixture by mixing untreated sludge with at least one alkaline material in an amount sufficient to raise pH of the sludge mixture to a level of at least about 12 and to increase percent solids in the sludge mixture to at least about 40% by weight; (b) forming a dried sludge mixture by drying the sludge mixture from step (a) in a direct or indirect dryer thereby increasing the percent solids thereof to at least about 50% by weight; (c) recycling a portion of the dried sludge mixture from step (b) to step (a); and (d) pasteurizing the dried sludge mixture from step (b) at a temperature at or above about 52°C to form a treated sludge product. Exemplary applications for the treated sludge product include an agricultural liming agent, a soil conditioner, a fertilizer, a topsoil blend ingredient, and a fuel.